

Part
B

Section 12: Marbled Murrelet Conservation
Areas: Landscape Analysis
and Planning

A. **Murrelet Conservation Areas: Landscape Analysis and Planning**

The HCP for marbled murrelet provides a series of twelve Murrelet Conservation Areas (MCAs). Buffer areas are provided for PL land adjacent to old growth redwood on public land: Areas within 300 feet of are not to be cut; areas within 1/4 mile are subject to seasonal harvest restriction.

With the Headwaters purchase and the delineation of the MCA's, most (4,322 acres, 84%) of the uncut (unentered or virgin) old growth redwood (OGR) is set aside from harvest. A substantial amount (3,597 acres, 29%) of lower density residual old growth will be available for harvest. The MCAs, buffers and Headwaters contain some 17,000 acres in total, including second growth. The general strategy **for** the MCAs is to focus conservation on the larger uncut stands or relatively contiguous uncut-residual old growth stands. Stands are buffered and incorporate second growth to improve geometry and increase connectivity - both for biological and management reasons.

The figure, **Locator for Detail Maps** shows the proposed MCAs and their names and the 1/4 mile and 300-foot buffer areas. The June 1998 Draft HCP provides for protection of all MCAs for the 50-year life of the permits, with an option to harvest either the Owl Creek or the Grizzley Creek MCA.

Locator for Detail Maps also shows the ten panels used to provide detail coverage of the MCAs. For each panel, the MCA is shown first on a base map and second on a forest vegetation map. The **Legend for Detail Maps** carries the legend for all of the panels.

The Map 10 panel is at a scale of approximately 1 inch = 1500 feet. The other panels are at a scale of approximately 1 inch = 1200 feet.

The **Base Map** shows the MCA boundary along with topography (40 foot contours), Class I and Class II streams, and roads. For reference, section lines (public land survey) are given, labeled with Township, Range, and Section. Topography comes from USGS digital elevation data. Streams location and classification are derived from hydrologic modeling of the terrain digital elevation data. Roads are based on air photos and PL field records. The map location of these features is subject to mapping accuracy limitations and is necessarily approximate and may vary by several hundred feet from the true position.

The **Forest Vegetation Map** shows forest areas ("polygons") as mapped by PL from air photos and updated in the field by individual timber harvest plans. The maps emphasize the old growth redwood component of the landscape. Uncut old growth is shown in three canopy densities ranging from 25% to 100% cover; residual old growth is shown in three canopy densities ranging from 0% to 75% cover. Second growth is presented in two size categories: 60 to 100 feet and greater than 100 feet. Douglas Fir

is a component of most of the redwood forest shown. It is mapped as Douglas Fir only where it is present as a pure stand.

Marbled murrelet survey data are shown in three ways:

- 1) Each survey station result is given as either “occupied”, “present only”, or “not detected”. Stations with at least one occupied detection are considered “occupied” and are marked as a cross.
- 2) Failure to record an occupied detection leads to a determination of “not-occupied” where survey intensity is sufficient according to protocol. Those stations tentatively deemed “not-occupied” are ringed with a small circle; the others are considered inconclusive.
- 3) The relative frequency of occupied detections at each station is displayed, ranging from Low, through Medium and High, to Very High. Logically, the rate of occupancy detections is an indicator of murrelet density, but no statistical relationship has been established.

Maps

Locator for Detail Maps

Legend for Detail Maps

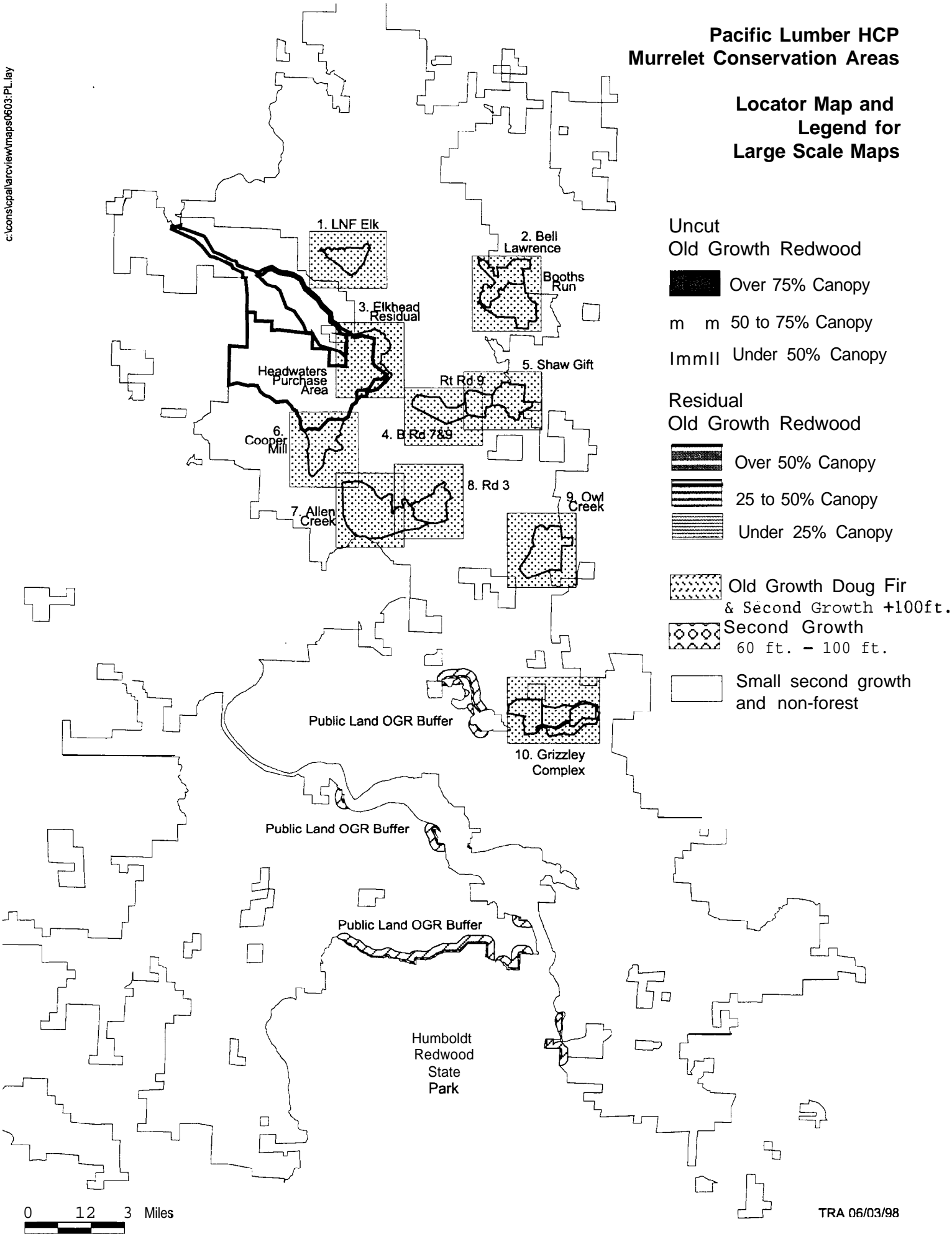
MCA Maps (each has a base map panel and a forest/murrelet map panel)

1. LNF Elk MCA
2. Bell Lawrence and Booths Run
3. Elkhead Residual
4. Below Rd. 7&9
5. Shaw Gift and Right Rd. 9
6. Cooper Mill
7. Allen Creek
8. Road 3 and East part of Allen Creek
9. Owl Creek (option)
10. Grizzley Creek Complex (option)

c:\constcp\larcview\maps\0603.PL.lay

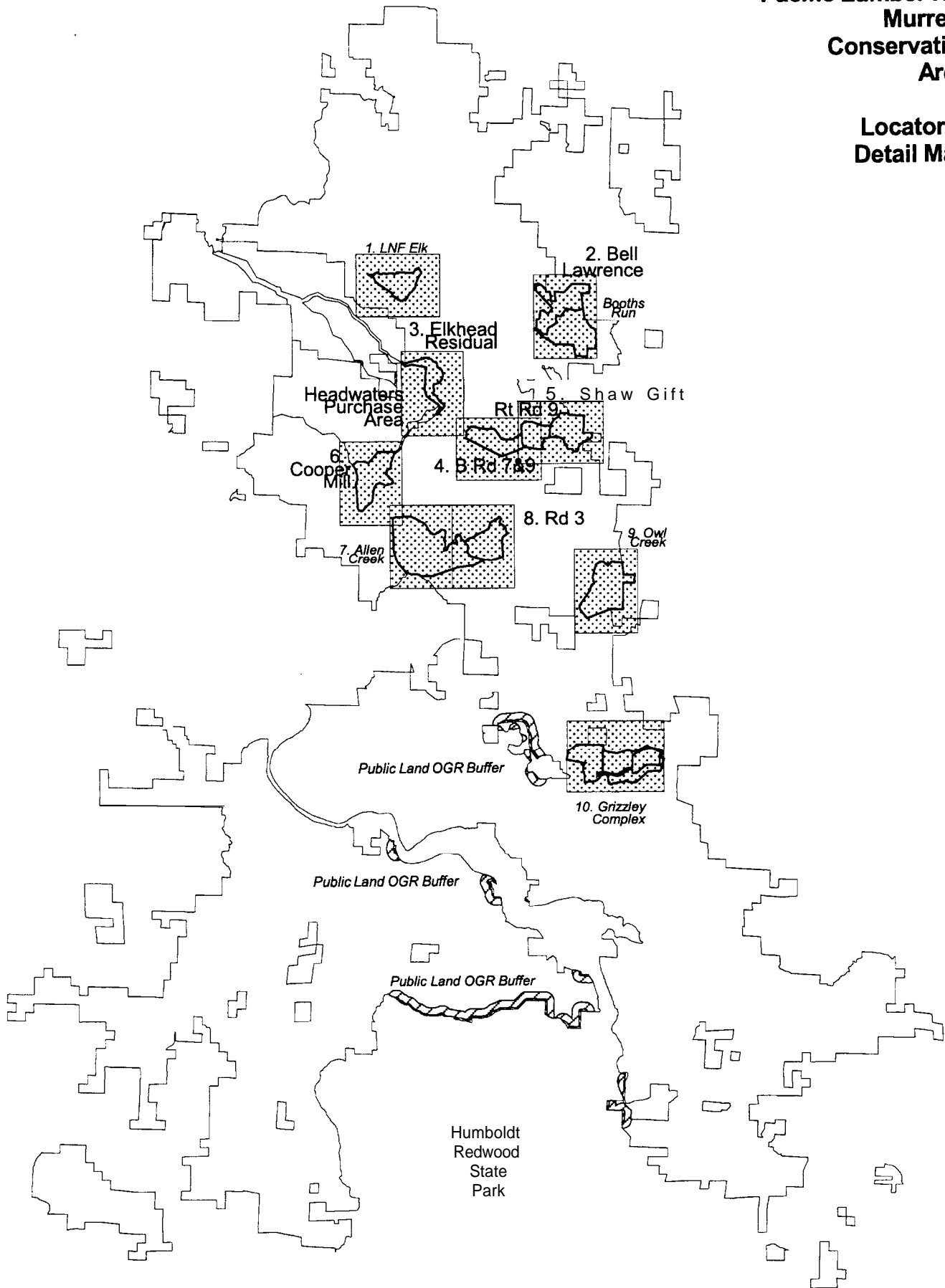
Pacific Lumber HCP Murrelet Conservation Areas

Locator Map and Legend for Large Scale Maps



Pacific Lumber HCP Murrelet Conservation Areas




Locator for
Detail Maps



Forest Vegetation Map




Uncut

Old Growth Redwood

-  Over 75% Canopy
-  50 to 75% Canopy
-  Under 50% Canopy

Residual

Old Growth Redwood

-  Over 50% Canopy
-  25 to 50% Canopy
-  Under 25% Canopy

Old Growth Doug Fir

Second Growth Over 100 feet

Second Growth 60 to 100 feet

Small second growth and non-forest

Marbled Murrelet Survey

Survey Results

- + Occupied
- ⊗ Present (surveyed > 9 x)
- × Present (surveyed < 9x)
- ⊙ Not Detected (surveyed > 3 times)
- △ Not Detected (surveyed < 3 times)

Relative Frequency of Occupied Detections at Station

- V Very High
(highest 10% of stations)
- H High
(top 25% to 10% of stations)
- M Medium
(top 50% to 25% of stations)
- L Low
(lowest 50% of stations)

Pacific Lumber HCP Murrelet Conservation Areas

Legend for Detail Maps

Base Map



Roads

2N-1E-12

Public Land Survey Location
Township - Range - Section

1320

Spot Elevation Feet
Above Mean Sea Level
Contour Interval 40 feet

Conservation Areas



Murrelet
Conservation
Area Boundary



1/4 mile Public Land
Old Growth buffer



300 foot Public Land
Old Growth buffer

Streams

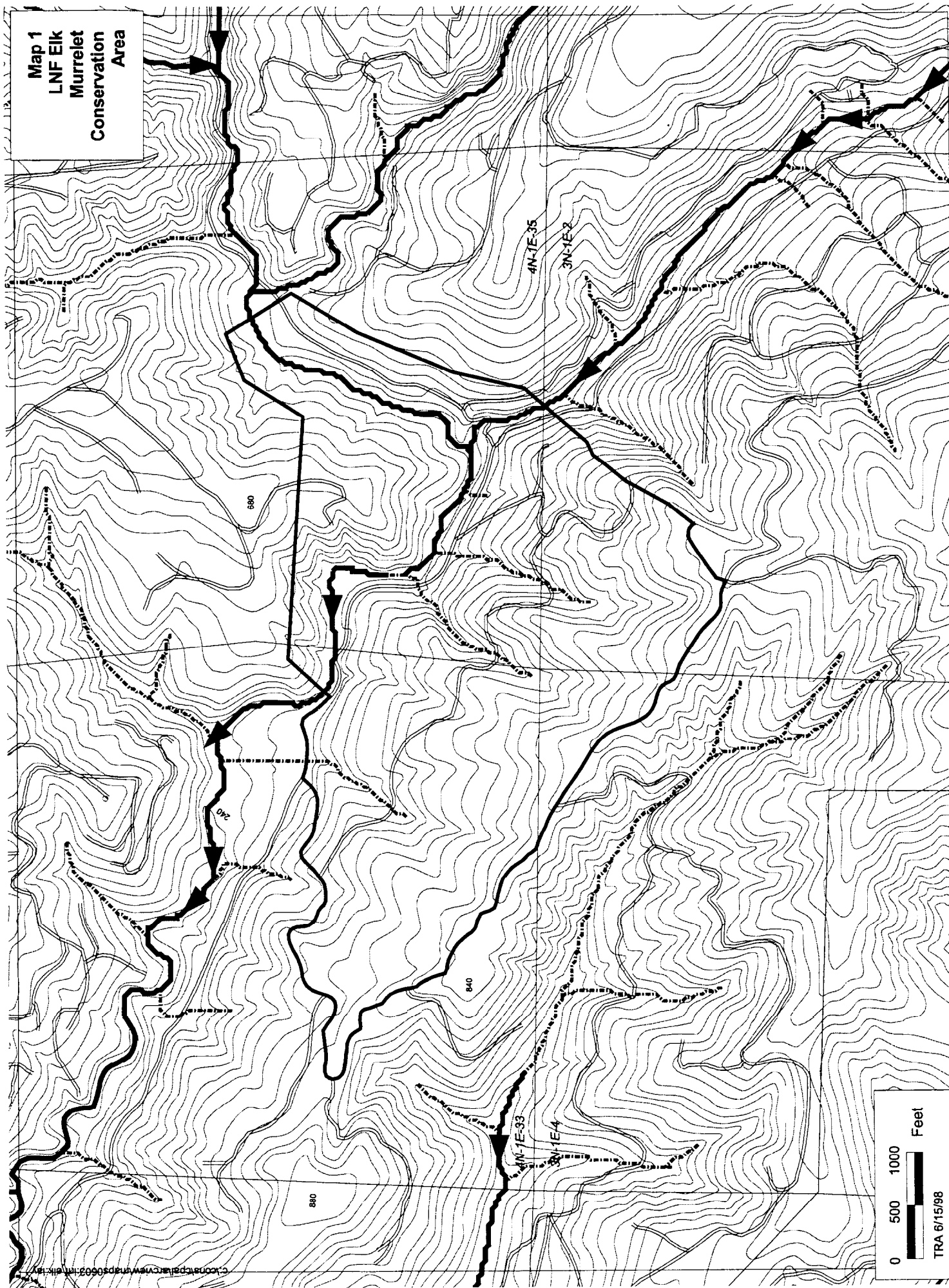


Class I, Fish Bearing
(Arrow indicates flow)



Class II, Non-Fish Bearing

Map 1
LNF Elk
Murrelet
Conservation
Area

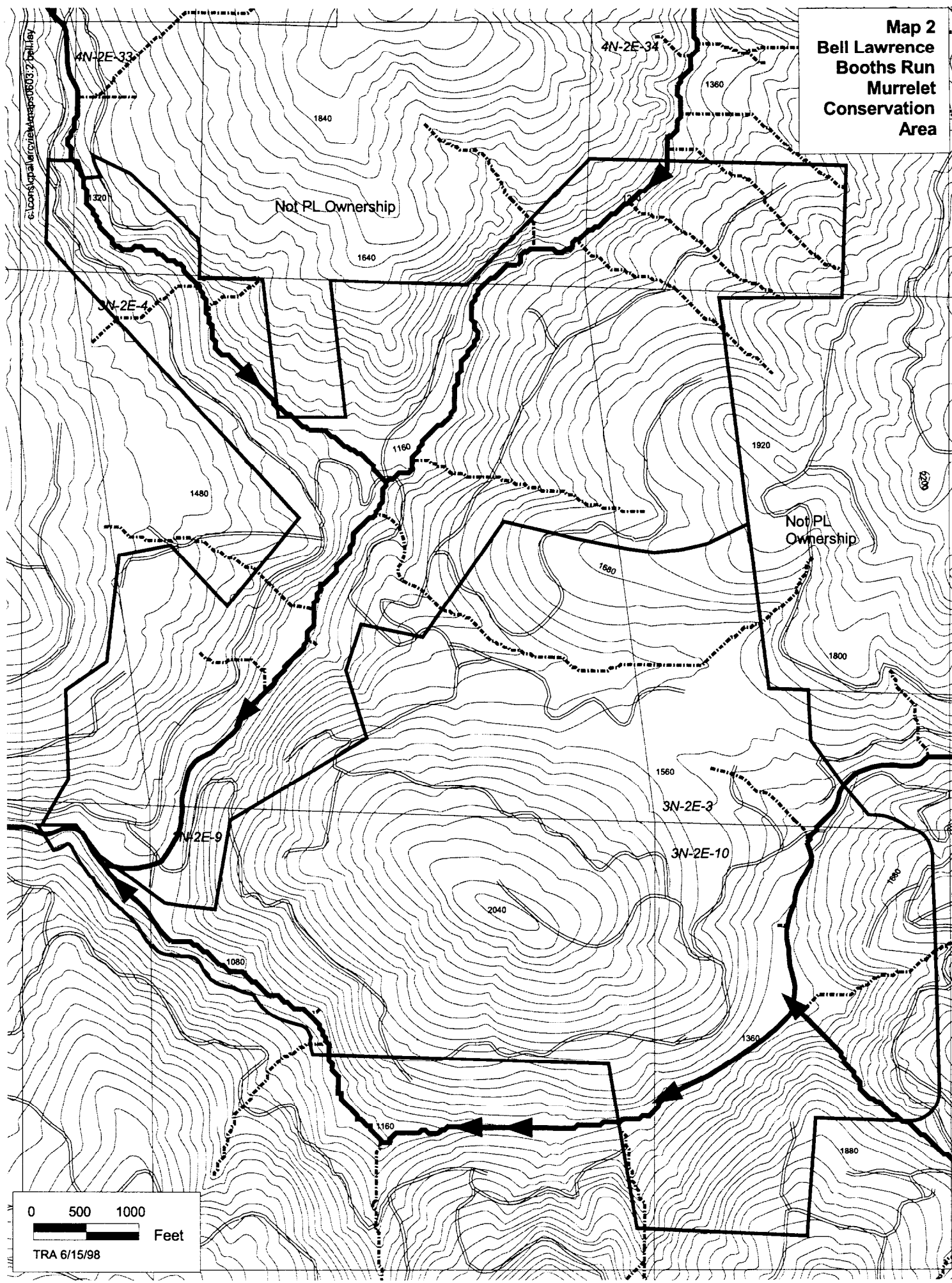


0 500 1000 Feet
TRA 6/15/98

Map 1
LNF Elk
Murrelet
Conservation
Area

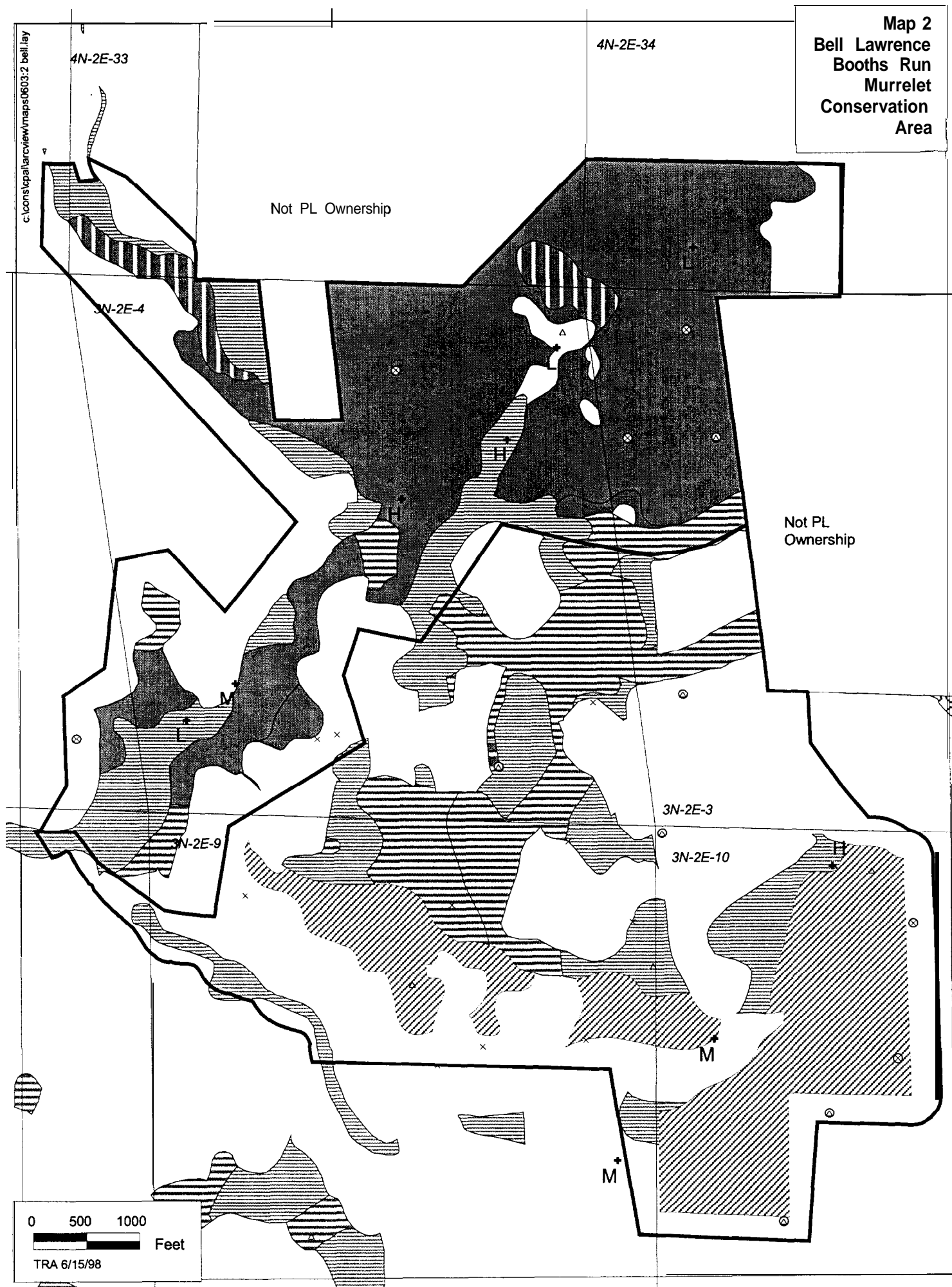


Map 2
Bell Lawrence
Booths Run
Murrelet
Conservation
Area

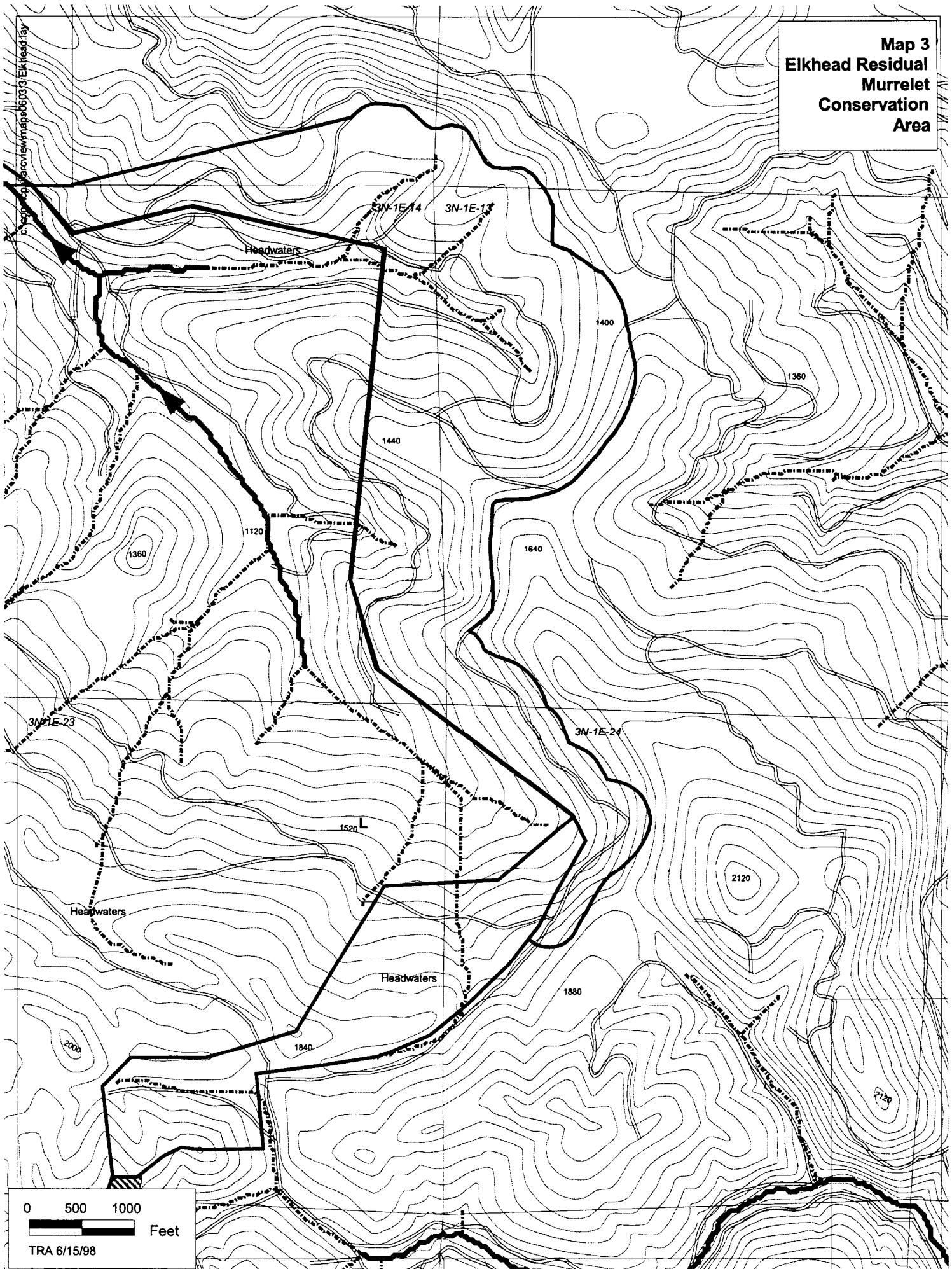


0 500 1000
Feet
TRA 6/15/98

Map 2
Bell Lawrence
Booths Run
Murrelet
Conservation
Area



**Map 3
Elkhead Residual
Murrelet
Conservation
Area**



Map 3
Elkhead Residual
Murrelet
Conservation
Area



arcview\maps\0603:3 Elkhead.lay

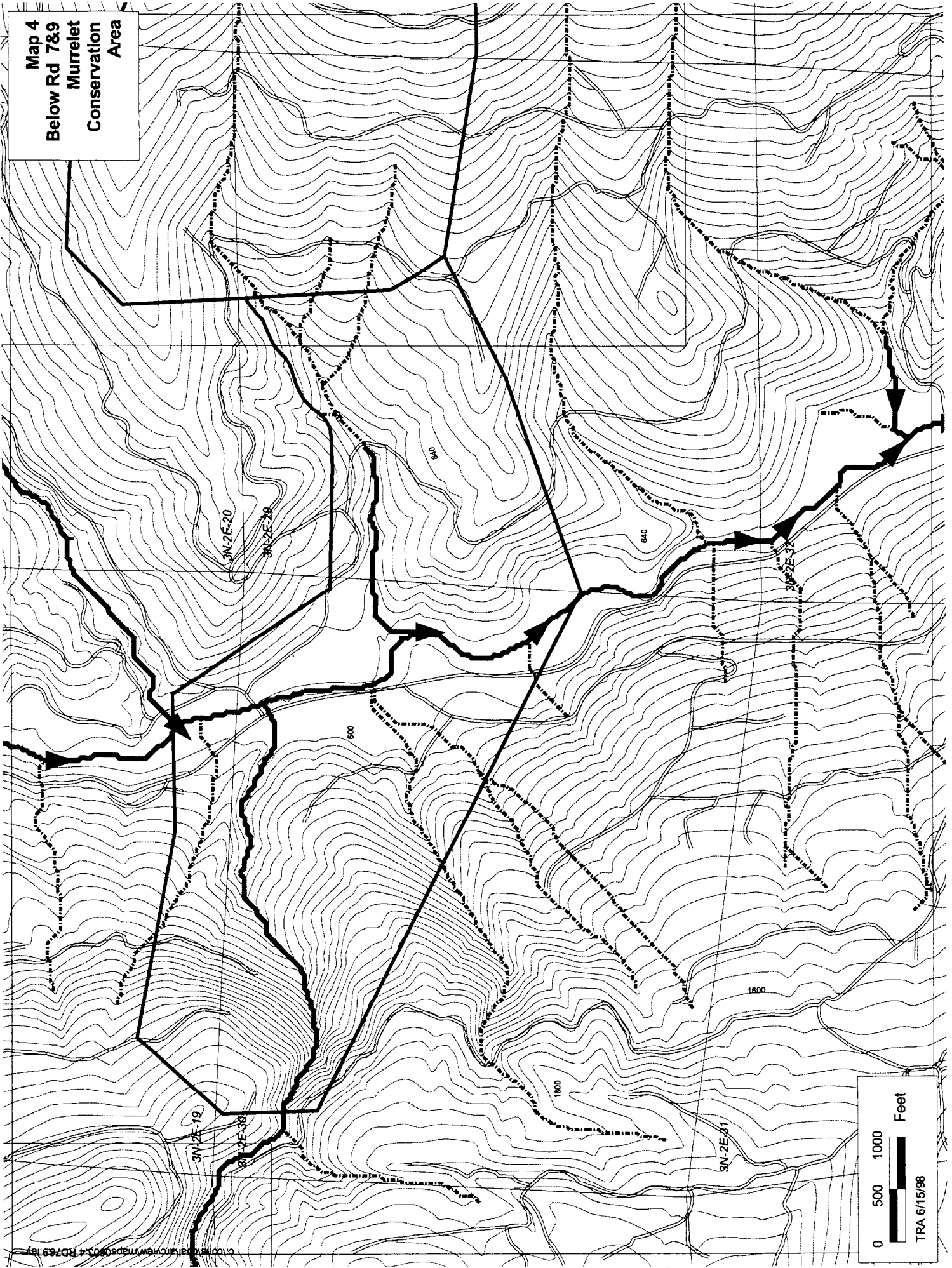
3N-1E-23

3N-1E-24

2120

0 500 1000
 Feet
 TRA 6/15/98

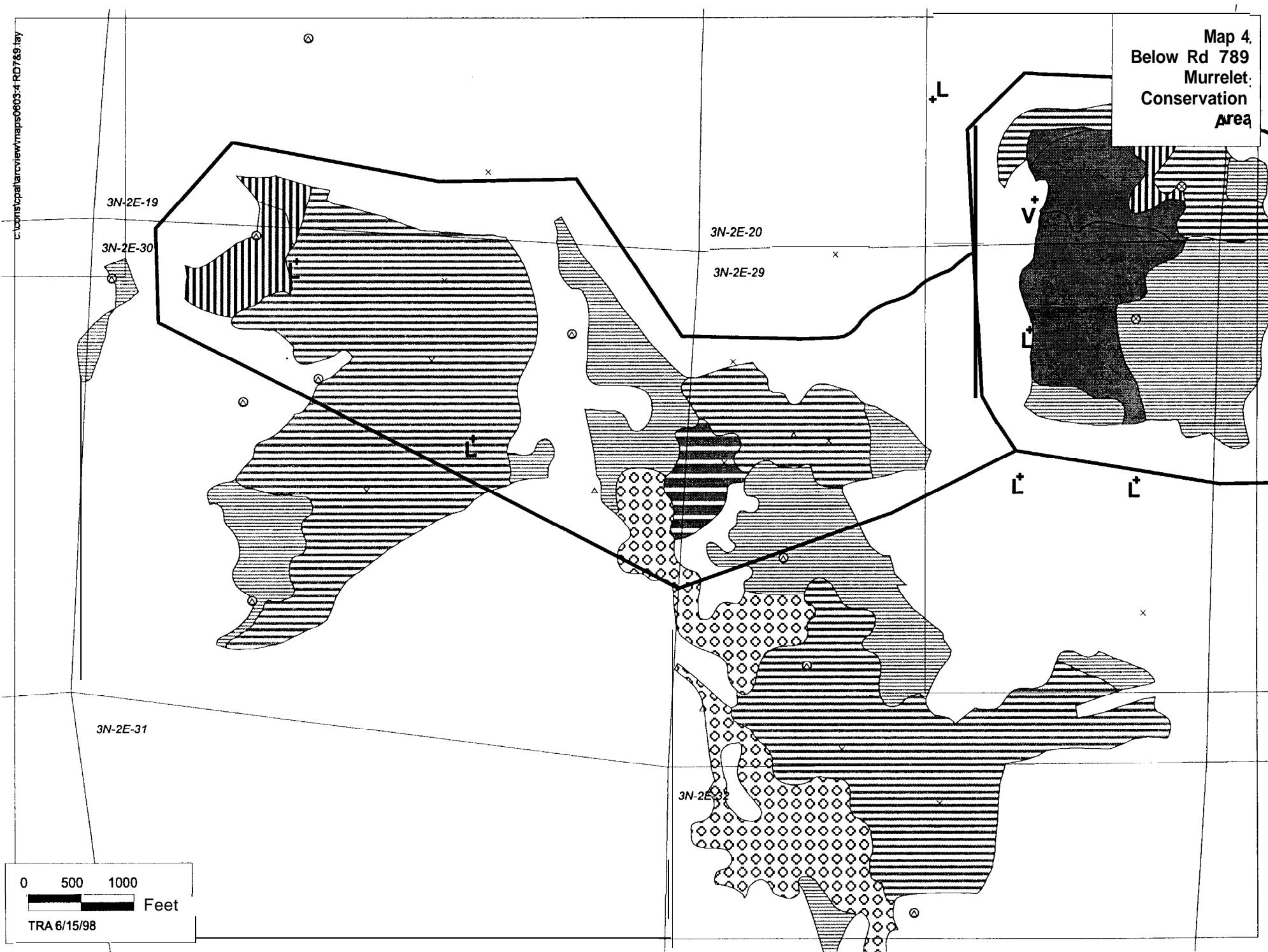
Map 4
Below Rd 7&9
Murrelet
Conservation
Area



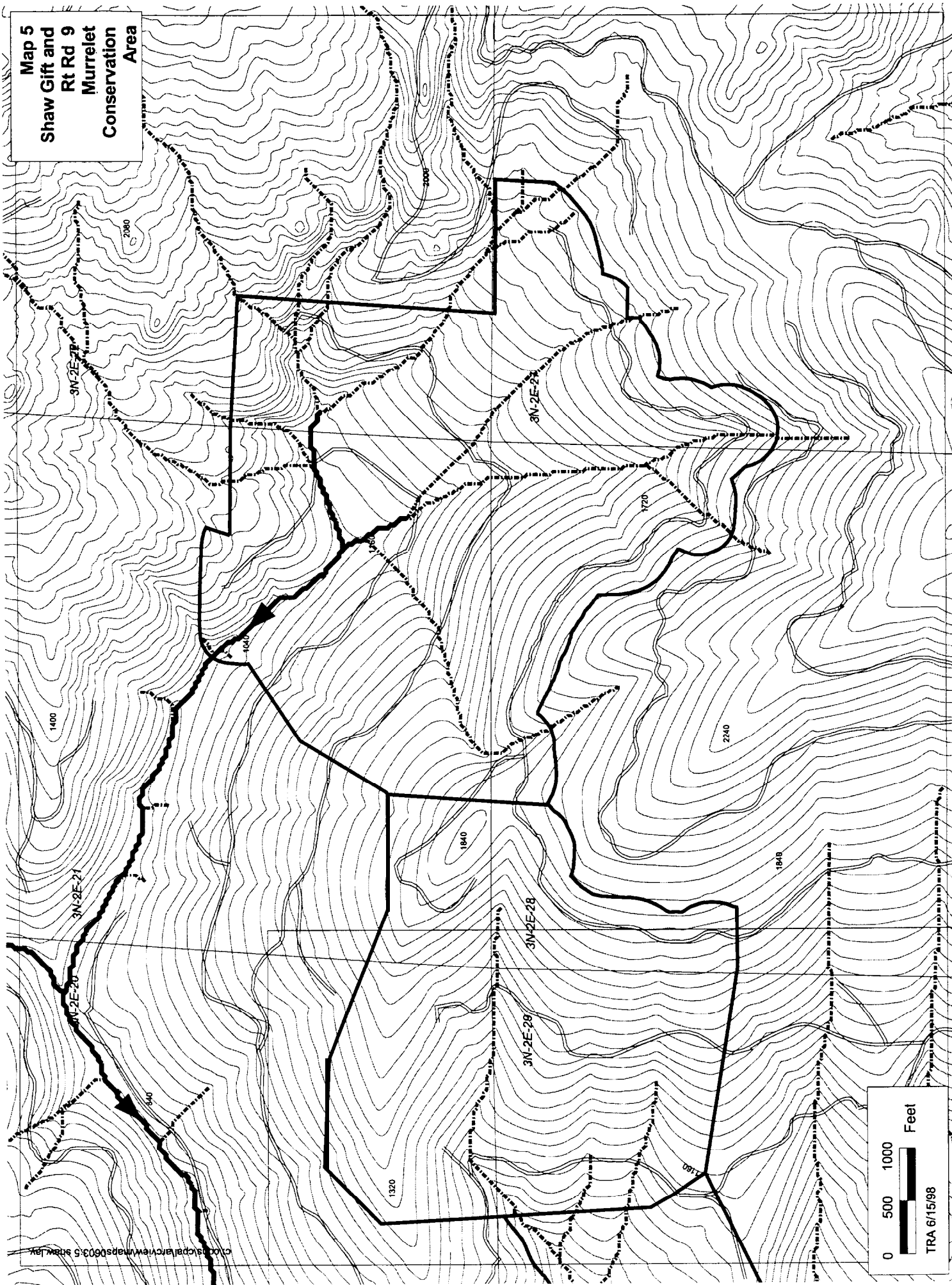
0 500 1000 Feet
TRA 6/15/98

c:\pnst\topof\arcview\maps\0603-4 RD7&9.tay

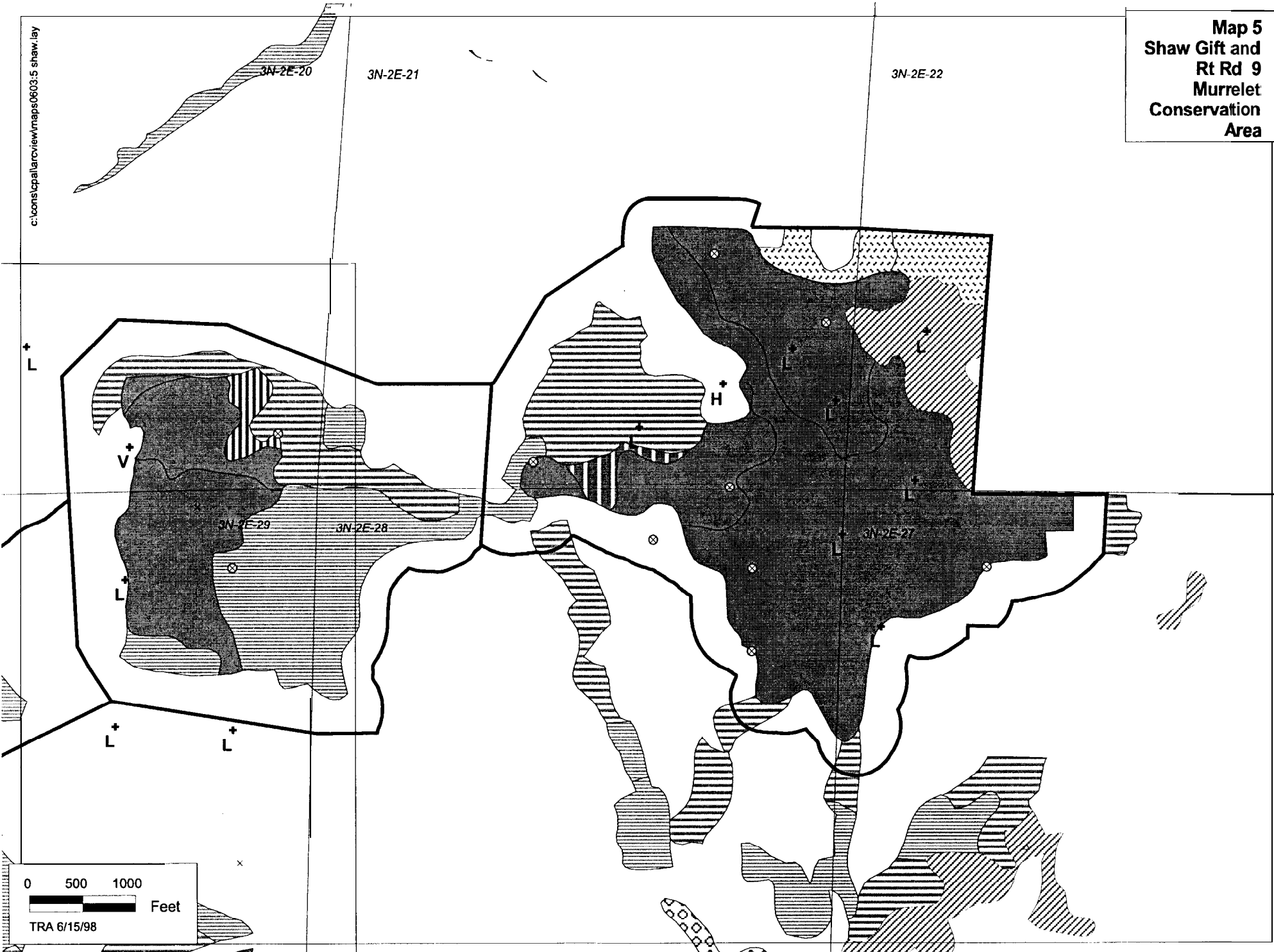
Map 4.
Below Rd 789
Murrelet
Conservation
Area



Map 5
Shaw Gift and
Rt Rd 9
Murrelet
Conservation
Area

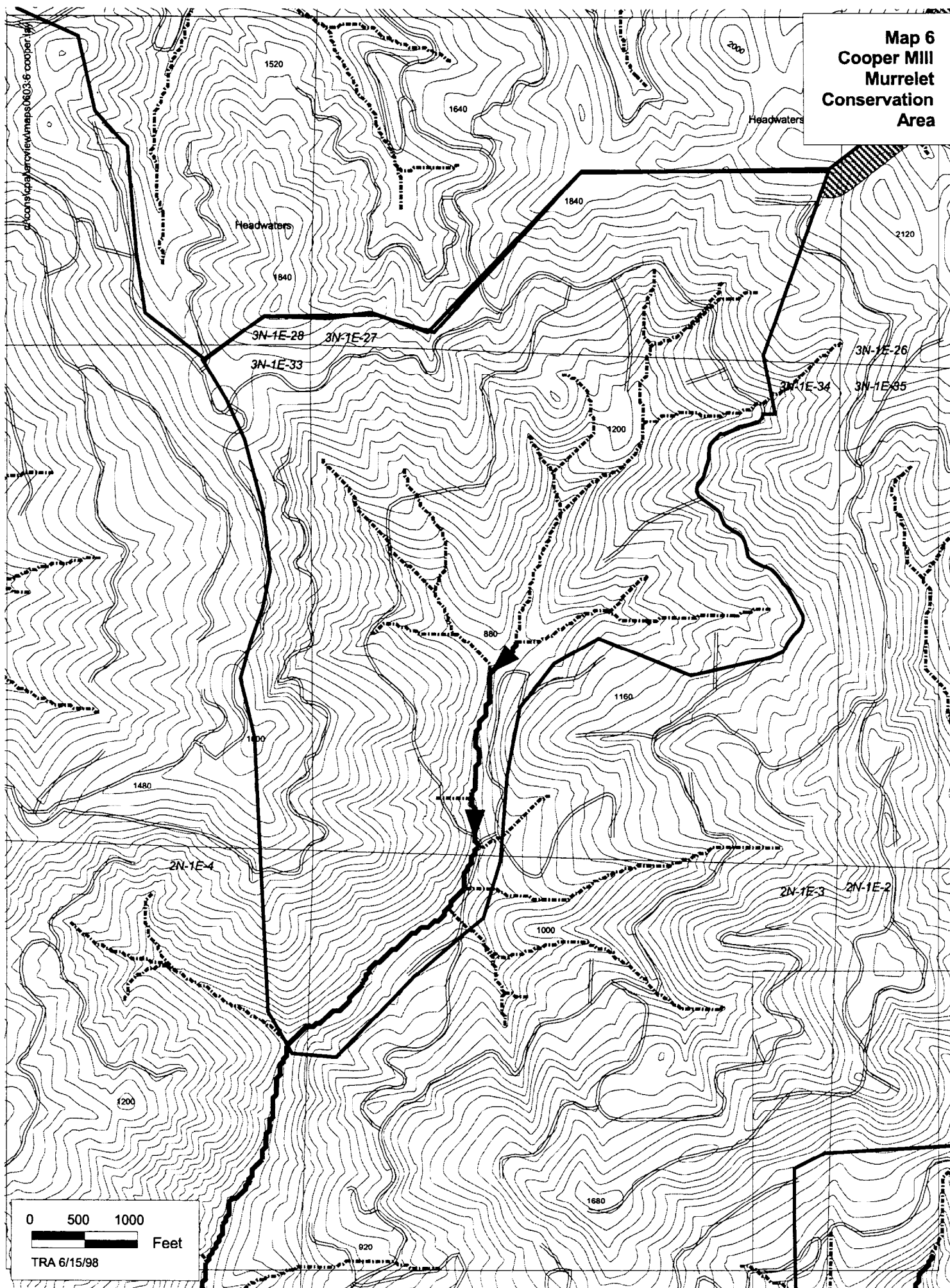


Map 5
Shaw Gift and
Rt Rd 9
Murrelet
Conservation
Area



c:\icons\cpallarcview\maps\0603.5 shaw.lay

**Map 6
Cooper Mill
Murrelet
Conservation
Area**

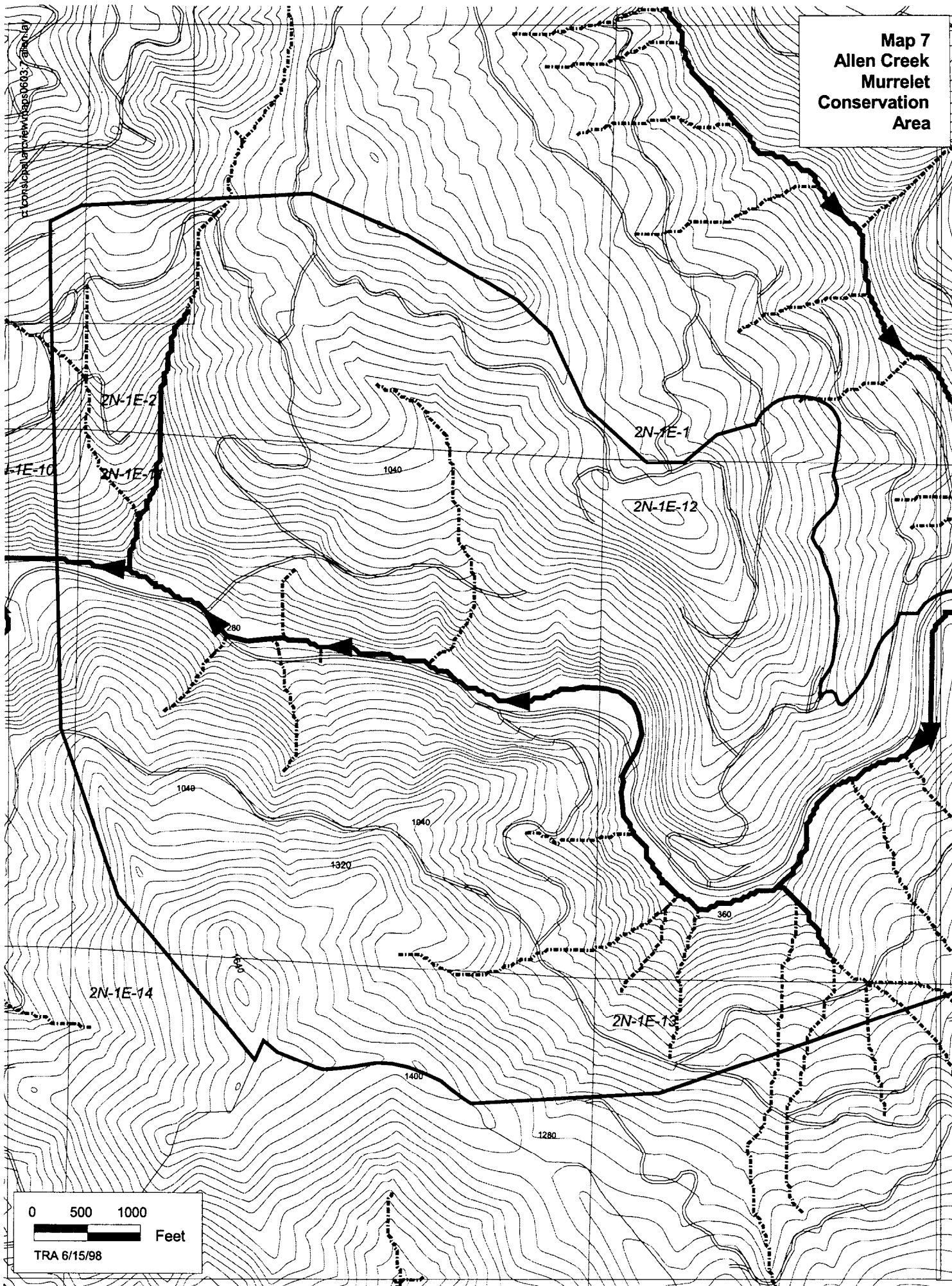


0 500 1000
Feet
TRA 6/15/98

Map 6
Cooper Mill
Murrelet
Conservation
Area

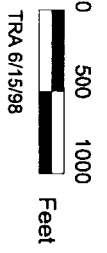


Map 7
Allen Creek
Murrelet
Conservation
Area



0 500 1000
Feet
TRA 6/15/98

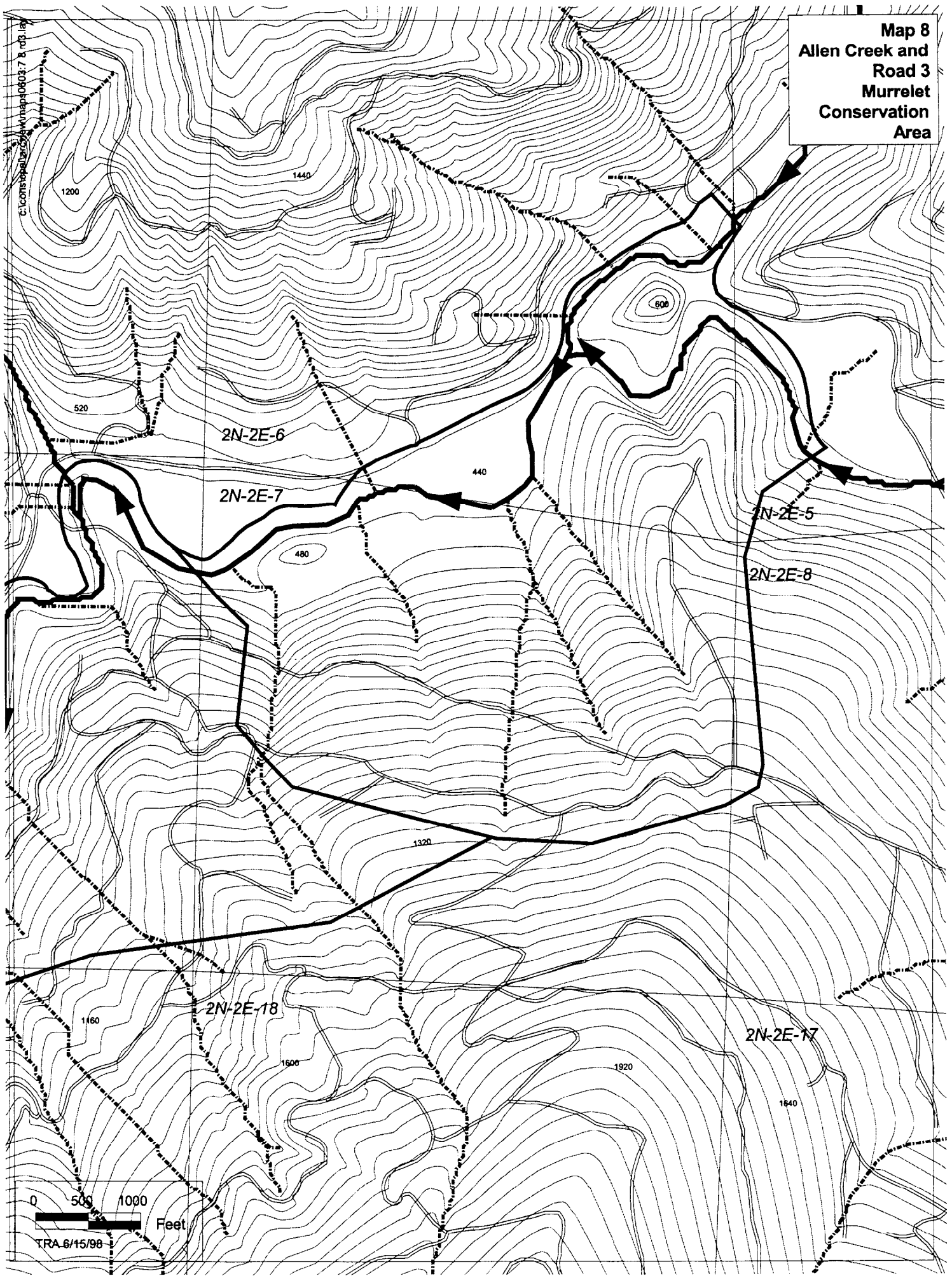
Map 7
Allen Creek
Murrelet
Conservation
Area



TRA 6/15/98



Map 8
Allen Creek and
Road 3
Murrelet
Conservation
Area

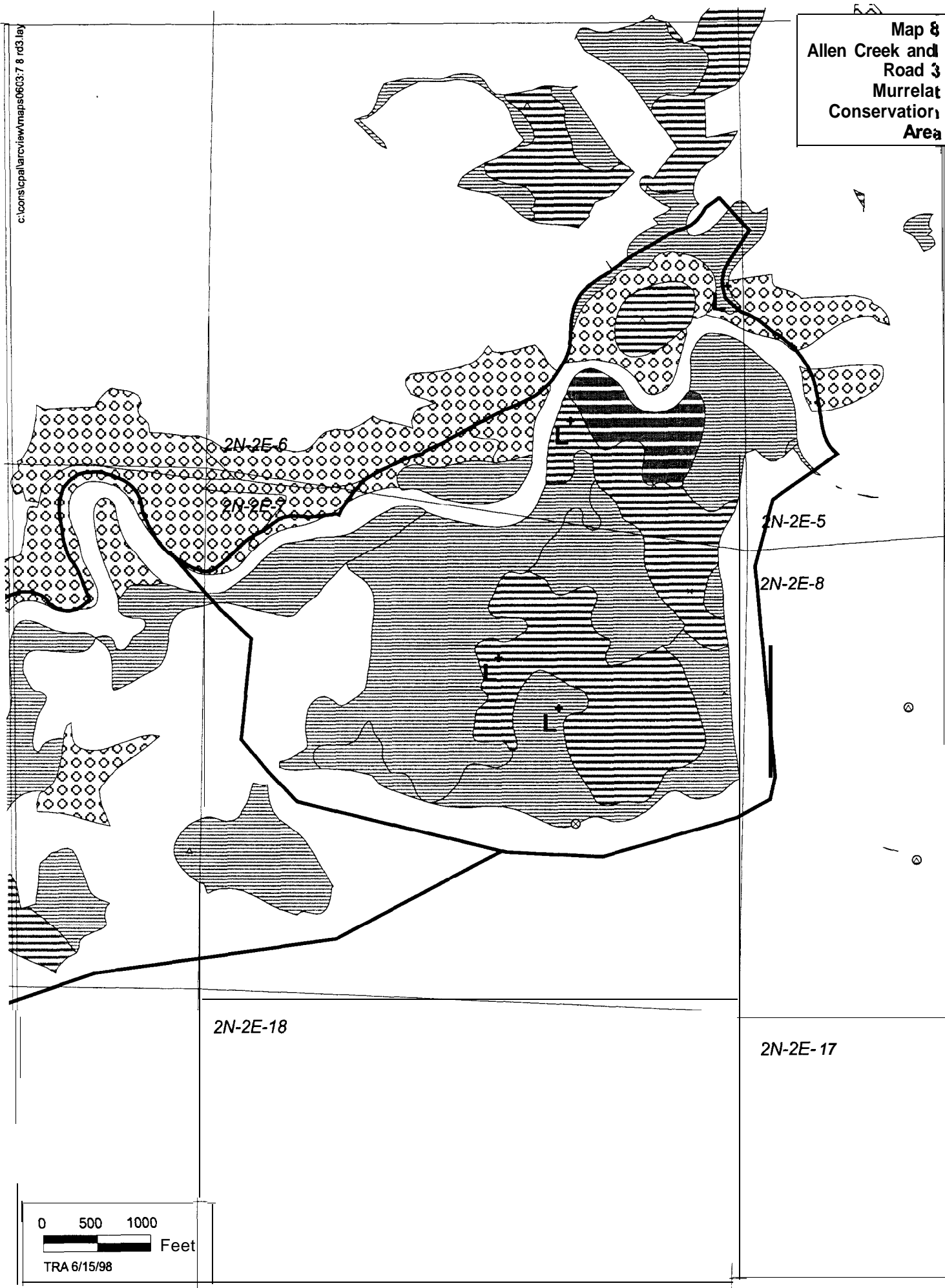


c:\conservation\map08\map0803.7 & rd3.lay

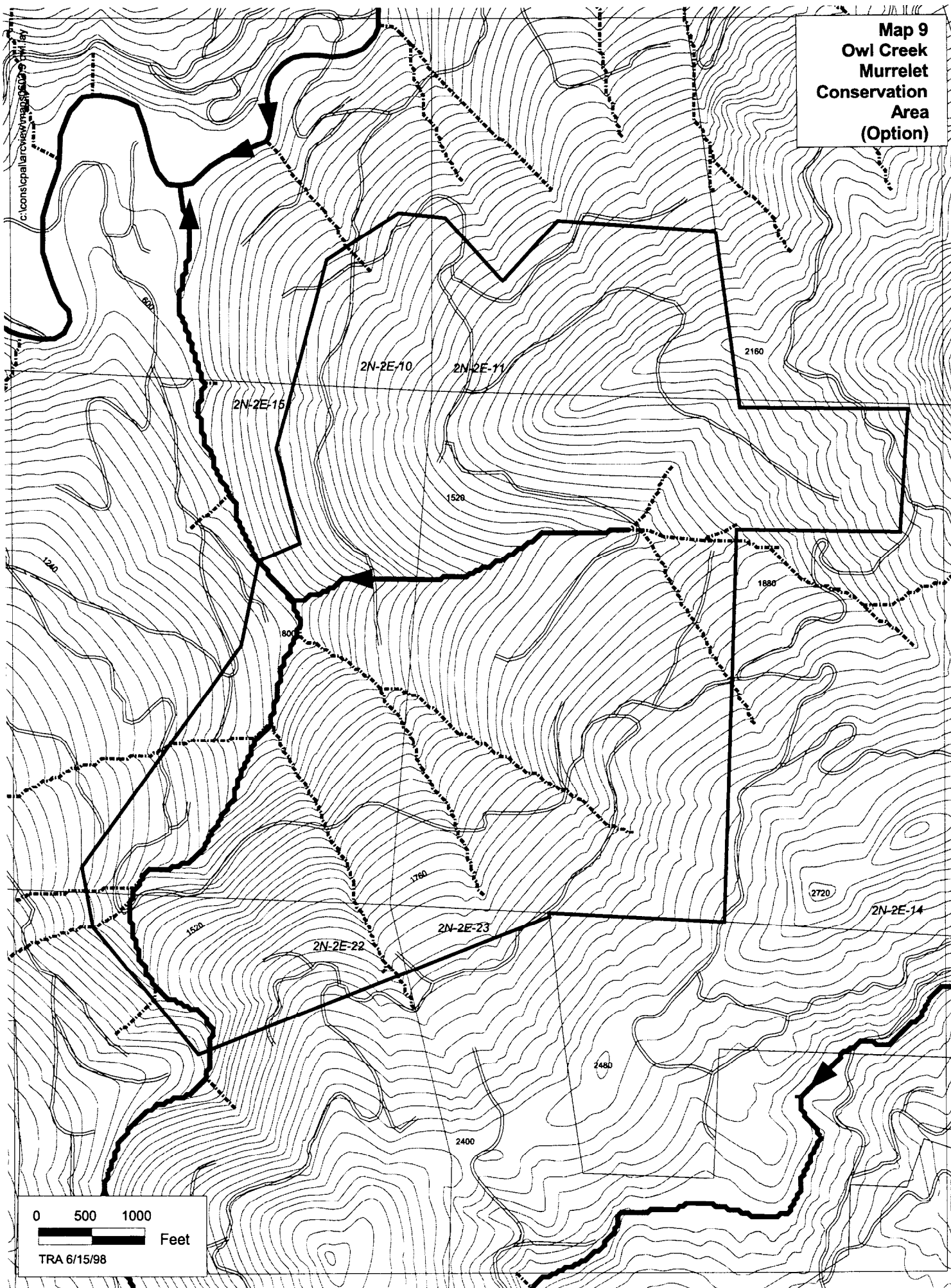
0 500 1000
Feet
TRA.6/15/98

c:\cons\cpal\arcview\maps\0603.7 8 rd3 lay

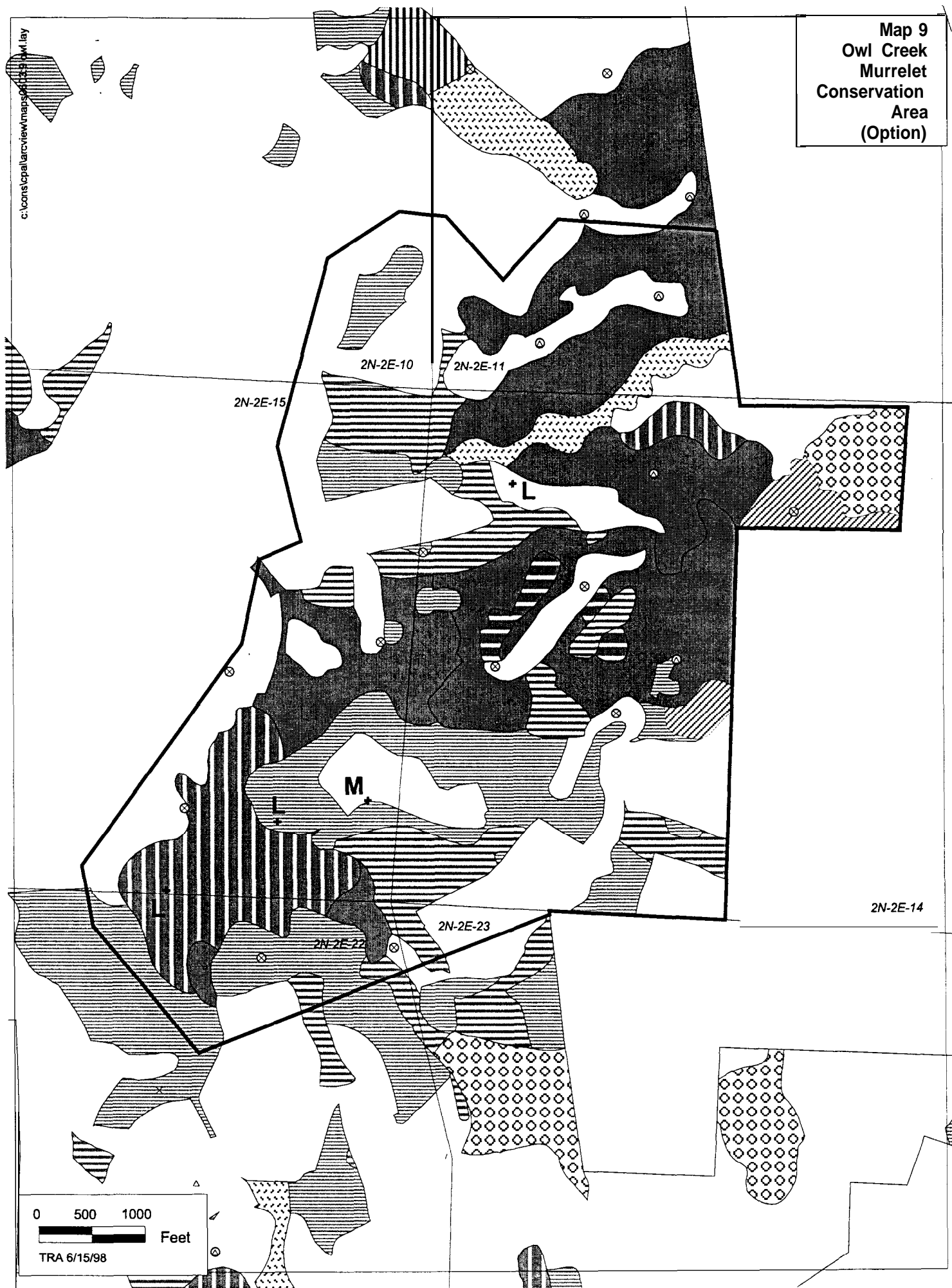
Map 8
Allen Creek and
Road 3
Murrelat
Conservation
Area



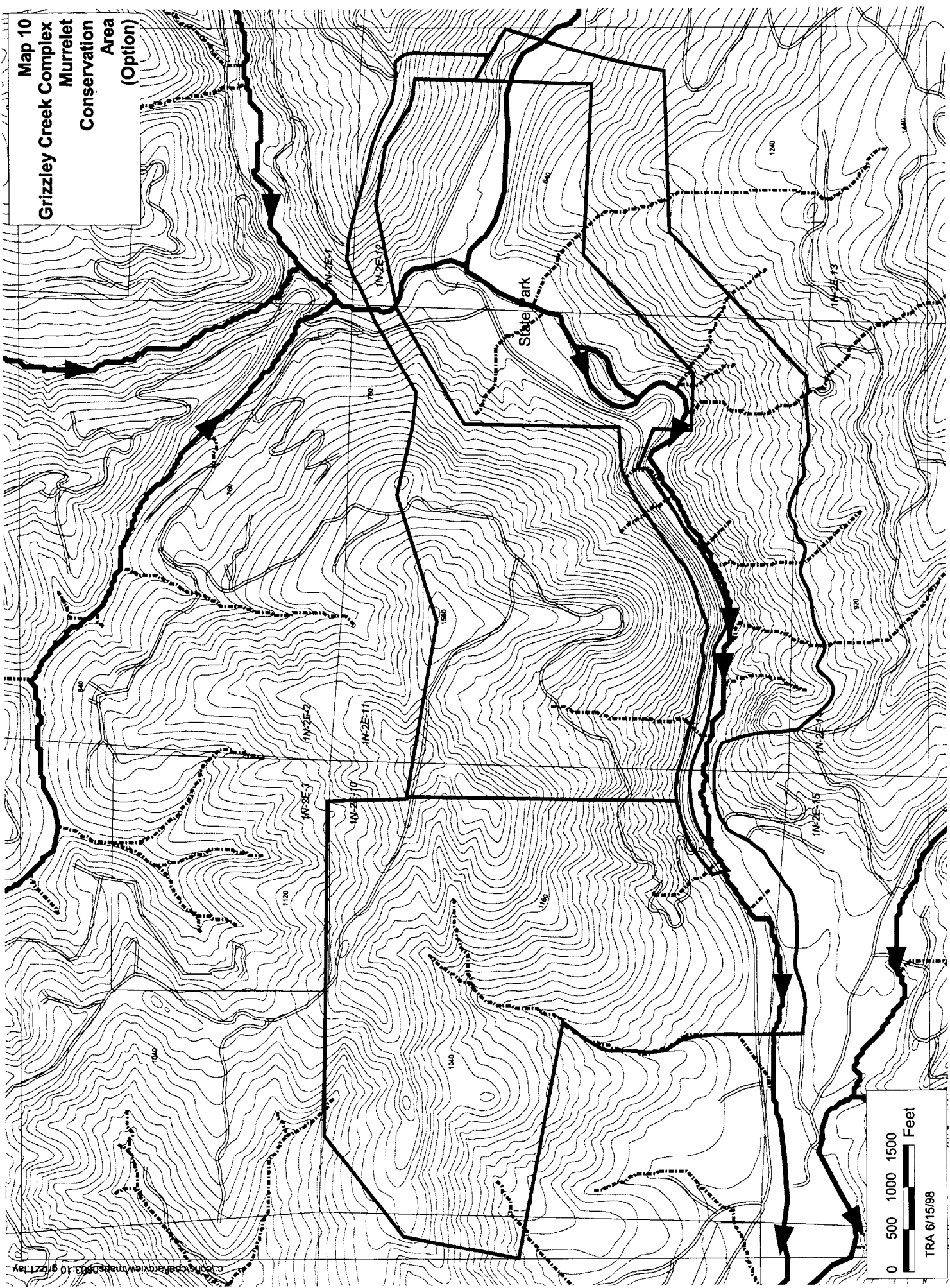
**Map 9
Owl Creek
Murrelet
Conservation
Area
(Option)**



Map 9
Owl Creek
Murrelet
Conservation
Area
(Option)



Map 10
Grizzly Creek Complex
Murrelet
Conservation
Area
(Option)



0 500 1000 1500 Feet
 TRA 6/15/98

Map 10
Grizzley Creek Complex
Murrelet
Conservation
Area
(Option)

